REMARKS

This preliminary amendment is being filed simultaneously with a Request for Continued Examination, which is being filed in response to the Final Official Action of March 31, 2003 and further in response to the Advisory Action of June 12, 2003, and presents new claims 15-28 in substitution for currently pending claims 1-14. The remarks below are in response to the Final Official Action of March 31, 2003, at which time claims 1, 2, 3, 7, 8, 10, 12, 13 and 14 were rejected under 35 USC §102(e) as anticipated by U.S. Patent No. 6,476,766 (*Cohen*) and claims 4, 5, 6, 9, 10 and 11 were rejected under 35 USC §103(e) as being unpatentable over *Cohen*.

Independent claim 15 defines an antenna which has a continuous, non-planar radiator surface, wherein the non-planar radiator surface is defined by variations in the depth of the radiator surface. Support for the recitation of variations in the depth of the radiator surface can be found in the originally filed Figures 2 and 3, as well as in the specification including page 3, lines 18-22. The feature of the radiator surface having variations in the depth of its surface is neither disclosed nor suggested by *Cohen*. In the Final Official Action, the Examiner references Figure 13B of *Cohen*, which has a corresponding description at column 27, lines 28-49. As is clearly seen in *Cohen*, what it shows in Figure 13B (as well as in Figure 13C) is the use of a flexible substrate 820 wherein the substrate is curved. The radiator surface is placed upon this curved substrate and as is clearly seen in Figure 13B as well as Figure 13C, there is no variation in the depth of the radiator surface placed on substrate. The curved radiator surface such as shown in Figure 13B does not disclose or suggest the presently claimed invention which defines a non-planar radiator surface defined by variations in the depth of that radiator surface. Claim 15 in particular defines that the non-planarity of the surface is defined within the surface itself, that is by variations in the depth of the radiator surface. There is no disclosure or suggestion in *Cohen* of such a feature. It is therefore respectfully submitted that newly submitted claim 15 is neither disclosed nor suggested by *Cohen*.

Dependent claims 16-21 depend from claim 15 and are therefore believed to be allowable in view of the allowability of claim 15. It is further pointed out that claims 16 and 17 further define preferable embodiments of the way in which the variations in the depth of the radiator

surface are provided. There is clearly no disclosure in *Cohen* of the feature in claim 16; that is, wherein the non-planar radiator surface is defined by indentations in the radiator surface. Furthermore, there is no disclosure or suggestion in *Cohen* of the non-planar radiator surface defined by pyramids formed in the radiator surface, as defined in claim 17. Support for the feature of indentations can be found in the specification as originally filed at page 4, lines 10-15, and support with regard to the pyramids can be found in the specification as originally filed at page 3, lines 14-17.

With respect to claim 18, there is no disclosure or suggestion in *Cohen* of a planar ground plane being provided opposite a non-planar radiator surface. *Cohen* discloses a planar radiator surface being associated with a planar ground plane (see, for example, Figure 11B and column 9, lines 5-9), as is well known in the art. However, the radiator surface of Figure 13B in *Cohen* is not described in the context of a ground plane. There is simply no suggestion in *Cohen* that a particularly shaped ground plane be used with the curved radiator surface shown in Figure 13B, and there is certainly no teaching that the ground plane used should be planar in configuration. Therefore, claim 18 is further believed to be distinguished over *Cohen*.

With respect to claim 19, *Cohen* does not disclose a non-planar radiator surface provided by variations in the depth of the radiator surface, and therefore *Cohen* cannot disclose the use of a dielectric thereon. Furthermore, as set forth in claim 20, the use of a dielectric in order to planarize the surface is neither disclosed nor suggested by *Cohen*. Without the disclosure of the dielectric, the effect of claim 21, which is to increase the average electrical height of the antenna, is further not taught by *Cohen*.

Referring now to independent claim 22, this claim defines a continuous, non-planar radiator surface wherein the planar ground plane is provided opposite the radiator surface. Again, there is simply no disclosure in *Cohen* which shows a non-planar radiator surface in combination with a planar ground plane, as defined in independent claim 22. In *Cohen*, various embodiments show an antenna which includes a planar radiator surface in combination with a planar ground plane (e.g., Figure 11B). Although Figure 13B may arguably disclose a curved radiator surface (although not as defined in claim 15, wherein the non-planar surface is defined by variations in

the depth of the radiator surface), there is no disclosure of a ground plane in Figure 13B. A person skilled in the art would not be taught by *Cohen* as to what shape ground plane should be used in conjunction with the radiator surface shown in Figure 13B. There is simply no teaching in *Cohen* which would lead a skilled person to conclude that a planar ground plane is the appropriate ground plane to use with the radiator surface shown in Figure 13B. In fact, given that *Cohen* previously describes planar ground planes in combination with planar radiator surface, a reasonable implication might well be that *Cohen* suggests that a non-planar radiator surface should be used in conjunction with a curved ground plane, which is totally non-suggestive of the requirement in independent claim 22 that the ground plane provided be planar in shape. It is therefore respectfully submitted that independent claim 22 is believed to be distinguished over *Cohen*.

Dependent claims 23-28, which ultimately depend from claim 22, are therefore similarly believed to be allowable. More particularly, claim 23 defines the feature of the non-planar surface being defined by variations in the depth of the radiator surface as discussed above with reference to claim 15. Claims 24 and 25 correspond to claims 16 and 17, respectively, while claims 26-28 correspond to claims 19-21, respectively. The comments made above with regard to those earlier-discussed dependent claims equally apply to these latter dependent claims.

In summary, it is respectfully submitted that newly added claims 15-28 are all allowable over *Cohen*. It is therefore respectfully submitted that the present application is now in condition for allowance and such action is earnestly solicited.

Respectfully submitted,

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Alfred A. Fressola
Attorney for Applicant
Registration No. 27,550

WARE, FRESSOLA, VAN DER SLUYS
& ADOLPHSON LLP
Bradford Green, Building Five
755 Main Street, P.O. Box 224
Monroe, CT 06468
Telephone: (203) 261-1234
Facsimile: (203) 261-5676
USPTO Customer No. 004955